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TI Carrier transport polymers - useful as carrier transport materials in organic thin film electroluminescence devices.
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Polymers of formula (I) are new.

(where, m = positive integer; G1 = absent, arylene, alkylene, alkylenedioxy or a gp. of formulae -p-C6H4-O-p-C6H4- (II), -p-C6H4-CH2p-C6H4- (III), -p-C6H4-C(CH3)2-p-C6H4- (IV), -O- (V), -C(O)- (VI), -C(O)-O-CH2- (VII), -C(O)-O- (VIII), -CH2-O-CH2- (IX) and divinyl-benzene gp. (X); G2 = alkyl or halo-substd. alkyl; G3 = H or alkyl; G4 = a gp. of formulae p-phenylene (XI), p-biphenylene opt. substd. on each ring by G5 (XII), (II)-(IV), -p-C6H4-C(CF3)2-p-C6H4- (XIII), -p-C6H4-S(O)2-p-C6H4- (XIV), -p-C6H4-C(O)-p-C6H4- (XV), p-naphthyl (XVI), -(p-C6H4)3- (XVII), -p-C6H4-C(CH3)2-p-C6H4-C(CH3)2-C6H4- (XVIII), divalent 9, 10-anthracene gp. (XIX), divalent fluorene gp. (XX), etc.; G5 = 1-12C alkyl or alkoxy).

USE - The polymers are useful as carrier transport materials or light-emitting materials in organic thin film electroluminescence devices and organic thin film photocells and carrier transport materials in electrophotographic photoreceptors.

ADVANTAGE - A carrier transport layer in organic thin film electroluminescence devices can be formed by film forming using a solvent such as spin coating and casting. The film obtd. has Tg of 120deg.C or more and an improved mechanical strength.
Dwg.0/16

